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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,477	11/25/2003	James Copland Moyer	386168008US1	6019
25096	7590	01/11/2005	EXAMINER	
PERKINS COIE LLP			TRAN, THUY V	
PATENT-SEA			ART UNIT	
P.O. BOX 1247			PAPER NUMBER	
SEATTLE, WA 98111-1247			2821	

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,477

Applicant(s)

MOYER, JAMES COPLAND

Examiner

Thuy V. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/25/03;9/13/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a response to the Applicant's filing on November 25th, 2003 and preliminary amendment concurrently filed therewith. In virtue of this preliminary amendment:

- Claims 1-12 are originally filed;
- Claims 8-12 are canceled; and thus,
- Claims 1-7 are now presented in the instant application.

Drawings Objections

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "controller" recited in line 5 of claim 1, and the "zero crossing detector" recited in lines 1-2 of claim 4 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified

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and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification Objections

2. The abstract of the disclosure submitted in the preliminary amendment is objected to because it solely contains a brief description of a full-wave sense amplifier while the claimed invention is an apparatus and method for driving a discharge lamp. Appropriate correction is required. See MPEP § 608.01(b).

3. The specification of the disclosure is objected to because of the following informalities:

In "CROSS-REFERENCE TO RELATED APPLICATION(S)", line 2, between ",", (second occurrence) and "which", insert --now U.S. Patent No. 6,683,422,--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Lin (U.S. Patent No. 6,259,615).

With respect to claim 1, Lin discloses, in Fig. 2, an apparatus for driving a lamp [CCFL] comprising (1) a DC to AC converter [80] for converting a DC signal to an AC signal, (2) a self-oscillating circuit [TX1, C1, C2, C3] between the DC to AC converter [80] and the lamp [CCFL]; the self-oscillating circuit filters (via C2, C3) the AC signal delivered to the lamp

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[CCFL], (3) a controller [22, 40] for adjusting the DC to AC converter such that the frequency of the AC signal is based on a resonant frequency of the self-oscillating circuit (see col. 7, lines 10-13), and (4) a full-wave sense comparator [42] (or amplifier as claimed; see col. 8, lines 38-39) that senses a current flowing through the lamp [CCFL].

With respect to claim 4, Fig. 2 of Lin further shows a protection circuit [62] (or zero-crossing detector as claimed, since it detects the voltage at the output of the transformer; see col. 6, lines 24-32; col. 8, lines 40-55) for determining the resonant frequency of the self-oscillating circuit [TX1, C1, C2, C3] and providing an indication of the resonant frequency to the controller [22, 40].

With respect to claim 5, Fig. 2 of Lin further shows that the lamp is a discharge lamp including a cold cathode fluorescent lamp.

With respect to claim 6, Lin discloses, in Fig. 2, an apparatus for driving a lamp [CCFL] and a corresponding driving method; the method comprises the steps of (1) converting a DC signal into an AC signal (via converter [80]), (2) filtering (via C2, C3) the AC signal to the discharge lamp [CCFL], (3) oscillating the converted DC signal such that the AC signal has a frequency based on a resonant frequency of the lamp [CCFL] (via a self-oscillating circuit [TX1, C1, C2, C3] between the DC to AC converter [80] and the lamp [CCFL]), and (4) sensing a full-wave current (via comparator or amplifier [42]).

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before

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November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claim 7 is rejected under 35 U.S.C. 102(e) as being anticipated by Ito et al. (U.S. Patent No. 6,597,131).

With respect to claim 7, Ito et al. discloses, in Figs. 1 and 5, a full wave sense amplifier circuit [8] for sensing a periodic current flowing through a lamp [6] comprising (1) means [OP1] for sensing a positive going portion of the periodic current, (2) means [OP2] for sensing a negative going portion of the periodic current, and (3) means [R1c, R2b, D1b, D2b] for combining the negative going portion and the positive going portion into a current flow signal [t DET].

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (U.S. Patent No. 6,259,615) in view of Okamoto et al. (U.S. Patent No. 6,369,519).

With respect to claim 2, Lin discloses, in Fig. 2, all of the claimed subject matter, as expressly recited in claim 1, except that the transformer be a step-up transformer.

Okamoto et al. discloses, in Fig. 3, an apparatus for driving a lamp [1] comprising a step-up transformer [Tr] connected to outputs of a full-bridge inverter [Q1, ..., Q4].

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It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the lamp driving apparatus of Lin by implementing the existing transformer with a step-up transformer to quantitatively enhance output voltage or power thereby to supply the lamp since such a use of the step-up transformer for the stated purpose has been well known in the art as evidenced by the teachings of Okamoto et al. (see Fig. 3).

With respect to claim 3, Fig. 2 of Lin shows that the self-oscillating circuit includes a filter [C2, C3] for the AC signal.

Double Patenting Rejection

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thornton*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claim 7 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,683,422. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to one of ordinary skill in the art at the time of the invention to have readily recognized that both are directed to a commonly inventive matter since the limitations claimed in claim 7 of the instant application are explicitly and fully included in claim 1 of the stated U.S. Patent.

Citation of relevant prior art

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11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Henry (Pub. No.: US 2004/0056607 A1) discloses a lamp inverter with pre-regulator.

Prior art Shannon et al. (U.S. Patent No. 6,114,814) discloses an apparatus for controlling a discharge lamp in a backlight display.

Prior art Eunghwa (U.S. Patent No. 5,619,104) discloses an illumination controlling apparatus.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

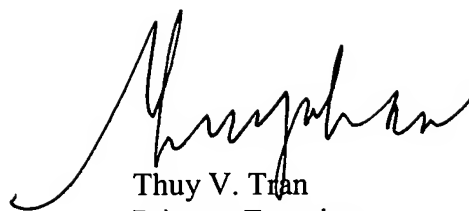
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Thuy V. Tran', is positioned above the printed name.

Thuy V. Tran
Primary Examiner
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01/07/2005